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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/905,068	07/16/2001	Song Zhang	0023-0038	5988
44987	7590	12/13/2005	EXAMINER	
HARRITY SNYDER, LLP 11350 Random Hills Road SUITE 600 FAIRFAX, VA 22030			HARPER, KEVIN C	
			ART UNIT	PAPER NUMBER
			2666	

DATE MAILED: 12/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**Application No. **09/905,068**Applicant(s) **ZHANG ET AL.**Examiner **Kevin C. Harper**Art Unit **2666**

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-11, 14, 15 and 18-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 11, 14, 15 and 18-23 is/are allowed.
- 6) ☒ Claim(s) 1-5, 8 and 9 is/are rejected.
- 7) ☒ Claim(s) 6, 7 and 10 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 June 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a). Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

***Response to Arguments***

Applicant's arguments, filed June 27, 2005, have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Ohba.

***Drawings***

Replacement drawings were received on July 6, 2005. These drawings are acceptable.

***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1, 2-5 and 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohba (US 6,101,193).

1. Regarding claim 1, Ohba discloses a system (fig. 4) for managing flow of data in a network device (fig. 4, item 40). The system comprises several queues (fig. 4, item 20a) and an arbiter (fig 4, items 30 and 42) to selectively bypass a queue based on the size of the data unit of the queue (col. 10, lines 11-15 and 35-37; fig. 5; note: the packet a2(500) is not outputted because the queue is not selected and instead packets b1, b2, d1, and d2 are transmitted).
2. However, Ohba does not specifically disclose that the queues are high priority queues and low priority queues. Although, Ohba discloses that queues have differing priority (weight; col. 9, lines 31-35). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to have high priority queues and low priority queues in the invention of

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Ohba in order to provide different qualities of service within a network (col. 1, lines 16-20 and 25-30; col. 12, lines 45-49).

3. Regarding claim 2, the arbiter performs for both the low priority and high priority queues (fig. 3, items 30 and 42).

4. Regarding claim 3, the arbiter performs for the low priority queues when none of the high priority queues has a notification (fig. 4, item 46).

5. Regarding claim 5, the arbiter includes a comparison element to compare the size of the data unit with a threshold (col. 10, lines 11-15) and outputs an inherent control signal based on the comparison (col. 7, lines 23-26).

6. Regarding claims 8-9, the system includes a flow control device (fig. 4, item 42; note: arbiter also performs comparison function) to determine a size of data units and provide a flow control signal when the size exceeds a threshold (col. 10, lines 10-17; note: if the packet is too large, the queue indicator is sent to the queue B3), where the flow device has an associated latency (col. 10, lines 49-51; note: if the packet is too large it has to wait until the next transmission round).

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ohba as applied to claim 2 above, and further in view of Ganmukhi et al. (US 5,850,399).

7. Ohba does not disclose that the arbiter performs round robin on respective queues. Ganmukhi discloses a round robin for respective queues (fig. 1, any one of items 40-70) that have similar priority (col. 2, lines 23-28; col. 5, lines 21-23). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to have round robin for queue

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having similar priority in the invention of Ohba in order to fairly distribute bandwidth to queues of common priority (Ganmukhi, col. 2, lines 47-50).

### ***Allowable Subject Matter***

8. Claims 11, 14-15 and 18-23 are allowed.
9. Claims 6-7 and 10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Conclusion***

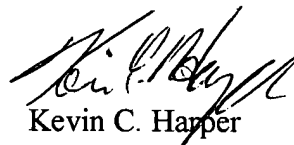
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Harper whose telephone number is 571-272-3166. The examiner can normally be reached weekdays from 11:00 AM to 7:00 PM ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema S. Rao, can be reached at 571-272-3174. The centralized fax number for the Patent Office is 571-273-8300. For non-official communications, the examiner's personal fax number is 571-273-3166 and the examiner's e-mail address is kevin.harper@uspto.gov.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications associated with a customer number is available through Private PAIR only. For more information about the PAIR system, see portal.uspto.gov. Should you have questions on

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access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Kevin C. Harper

December 8, 2005